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C O N F I D E N T I A L SECTION 01 OF 03 TAIPEI 000937

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SUBJECT: TAIWAN EXPRESSES INTEREST IN GLOBAL FORUM TO
TACKLE GHG EMISSIONS FROM HIGH-TECH ELECTRONICS INDUSTRIES

Classified By: Economic Chief Hanscom Smith for reasons 1.4 (b) and (d)

11. (C) SUMMARY. Taiwan's high-tech electronics industries annually produce millions of CO2-equivalent tons of greenhouse gases (GHG). Despite successful voluntary GHG emission reduction programs, more action will be required under the likely implementation of a GHG emissions cap now under review by Taiwan's legislative body. A recent visitor from US EPA's Climate Change Division gauged strong support in both policy and industry circles in Taiwan for a notional EPA proposal to create a global council to organize and consolidate GHG reduction efforts in high-tech electronics industries. The proposed council would give Taiwan's emerging "green" industries, in particular, the opportunity for interaction and technological exchange with foreign companies. END SUMMARY.

Tackling GHG Emissions from High-Tech Industry

12. (SBU) Fluorinated Greenhouse Gases (F-GHGs) including PFCs, HFCs, SF6, and NF3, are used and emitted in the manufacture of high-tech electronics such as semiconductors, LCDs, LEDs, and photovoltaic arrays (PV). These four industries in particular are all current or emerging key sectors of Taiwan's high-tech economy. According to Taiwan sources, the amount of F-GHGs emitted annually island-wide are equivalent to 10 million tons of CO2 (approximately 4.5 percent of Taiwan's total CO2 emissions). F-GHG compounds merit attention because they are particularly strong greenhouse gases. Sulfur hexafluoride (SF6), for instance, has an atmospheric life of 3,200 years and contributes 22,800 times more to global warming than an equivalent amount of CO2. In Taiwan, SF6 emissions alone annually contribute the equivalent of 4.4 million tons of CO2 to the atmosphere.

13. (SBU) The Taiwan Environmental Protection Administration's (TEPA) voluntary emissions reduction program, started in 2001, has prevented the release of F-GHGs equivalent to an estimated 45 million tons of CO2 over the past 8 years. These reductions were achieved largely through the installation of gas recycling and related technologies, funded by the implementing companies. The Taiwan Semiconductor Industry Association (TSIA), which sits on the World Semiconductor Council (WSC), has agreed to meet additional GHG reduction goals by 2010. Similarly, Taiwan is a member of the World LCD Industry Cooperation Committee (WLICC), and along with Japanese and Korean manufacturers

agreed to GHG reductions in the LCD industry, also by 2010.

How green is green?

¶4. (SBU) Taiwan's Executive Yuan in April approved a plan to invest approximately USD 1.5 billion to boost the production value of Taiwan's green energy industry from 1.2 percent of overall manufacturing in 2008 to 6.6 percent in ¶2015. The Ministry of Economic Affairs (MOEA) announced that this program will unfold in two phases, with the first phase focusing on developing the solar power and LED industries. MOEA aims for Taiwan to become one the world's top-three producers of solar cells, and the world's biggest producer of LED light sources and modules. Manufacturing processes for solar cells (PVs) and LEDs borrow heavily from semiconductor manufacturing, thus giving Taiwan's established high-tech industries relatively low technological barriers to entry. Like semiconductor and LCD manufacturing, PV and LED industries also use F-GHGs in production and cleaning processes. Leading Taiwan PV and LED firms do not currently make F-GHG use and emissions data available, and based on our meetings with company executives, these firms do not always seem to have a detailed sense of their own GHG emissions figures.

¶5. (SBU) The crux of the F-GHG issue for emerging green industries is twofold. First, from a product life-cycle point of view, if the use of F-GHGs is high, this would offset some of the environmental benefit gained from using

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these technologies. From a branding and marketing standpoint, it is difficult to sell yourself as "green" if you make more pollution than you prevent. Second, Taiwan is likely to set legally enforceable GHG reduction goals later this year, when the Legislative Yuan is widely expected to pass the GHG Reduction Act. To meet these reduction goals, Taiwan's industries will have to monitor and report their GHG emissions. Corporate leaders have expressed interest in getting ahead of policy-makers on this issue and setting targets that could be achieved through business-friendly approaches, potentially staving off command-and-control policies implemented from above.

EPA Visitor Gauges Interest in a New Council

¶6. (C) U.S. EPA Climate Change Division International Climate Policy Advisor Scott Bartos, on a recent visit to Taiwan under ongoing bilateral cooperation in the field of environmental protection, was able to gauge local interest in the formation of a new international forum that he is considering. This forum, with the notional name of Global High-Tech Industries Climate Protection Council, would have a permanent secretariat, committees, and working groups, and would seek to incorporate and build on existing climate protection initiatives already underway in the WSC and WLICC to address GHG emissions from the high-tech electronics industry. The proposed council would also solicit participation from other high-tech, GHG emitting industries such as PVs LEDs. In addition, membership would be open to both developed and developing countries and their industries, so long as they have high-tech manufacturing capacity and the potential for future industry growth (for example, China, Singapore, Malaysia, and the EU). The proposed council's GHG emissions reduction activities and sectoral targets may serve as nationally appropriate mitigation actions (NAMAs) and support post-2012 UNFCCC negotiations.

The Road Ahead

17. (C) Bartos noted that his meetings in Taiwan were all highly productive. Taiwan's EPA, industry representatives, and the Industrial Technology Research Institute (a non-profit entity under the supervision of the MOEA) all expressed strong interest in joining an organization like the one described by Bartos. Vice President Chen Jin-yuan of leading LED manufacturer Epistar noted that his company would consider taking a primary role in the formation of an international LED working group within the proposed council. Bartos plans to work on drafting notional guiding principles for the council and organizing committees and working groups. He hopes to hold follow-up discussions with multiple potential members and interested parties at the December SEMICON Japan meeting, and pending the successful outcome of those discussions, Bartos is considering using the 2010 International Semiconductor Environment, Safety, and Health (ISESH) Conference hosted by Taiwan to officially announce the proposed council (Note: No date has yet been set for ISESH 2010).

18. (C) Among the various entities globally that Bartos has approached to gauge support for the proposed council, Taiwan's policy-makers and industry have expressed the greatest enthusiasm so far, and along with Japan have already done the most individually to voluntarily control F-GHG emissions from high-tech electronics industries. In contrast to Taiwan, U.S. industry buy-in to the proposed council remains uncertain, according to Bartos. In addition, it is not clear that Korean industry is interested in making GHG reduction commitments for beyond 2010. Bartos suggests that Korea's relatively low level of abatement activity may be a strategic ploy by Korean industry to maximize Clean Development Mechanism project revenues and allow companies there to make what appear to be significant GHG reductions if an emissions cap is implemented in the future.

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Comment - Is Taiwan's Support Enough?

19. (C) Taiwan's recent and expected future moves toward capping domestic GHG emissions will affect industries across the island. Even green industries, such as PV and LED manufacturing, will have to account for and address their use and emission of fluorinated and non-fluorinated GHGs. From the industry perspective, a venue for international cooperation and engagement like the proposed Global High-Tech Industries Climate Protection Council could offer Taiwan's semiconductor, LCD, PV, and LED industries an arena for the acquisition of technological know-how and best practices in GHG abatement and environmental management. At the same time, a global forum with Taiwan representatives from both industry and the policy realm would offer the island a forum for international engagement. Moreover, Taiwan's industries are big players in global high-tech manufacturing, and Taiwan would have plenty of opportunities to share its expertise in the proposed multi-party council. The strong support for the council coming from all sectors in Taiwan is therefore not surprising. However, wrangling the same level of support from other prospective council members may be more difficult. We would encourage continued coordination between U.S. EPA and the Taiwan public/private sectors to leverage the latter's leading position and enthusiasm to spur global cooperation in this area.

10. (U) This cable has been cleared by U.S. EPA's Scott Bartos.
WANG